

Application No. 10/601,361

Reply to Office Action

**REMARKS**

Reconsideration of the above-identified application is respectfully requested in view of the foregoing amendments and the following remarks.

*Summary of the Application*

Claims 1, 2 and 4-20 are currently pending. New claim 11 comprises the subject matter of allowed claim 3 rewritten in independent form, with claims 12-18 comprising the substance of original claims 4-10. Several claims are amended to sharpen their language. New claims 19 and 20 include the subject matter of substantially all of claims 1 and 2, respectively, while limiting the description of surfactant included therein. No new matter is introduced by way of these amendments.

*Summary of the Office Action*

The Office Action acknowledges that claims 1-10 are pending, with claims 1, 2 and 4-10 being rejected. Claim 3 is objected to as being dependent on a rejected base claim, but would be allowable if rewritten in independent form.

Specifically, claims 1, 2 and 4-10 are rejected as obvious over U.S. Patent 5,422,234 to Bauer et al. ("Bauer") and U.S. Patent 4,011,082 to Sakai et al. ("Sakai"). The Action argues that Bauer discloses the thermally processable imaging element substantially as claimed, while Sakai discloses the surfactants as claimed. The Action concludes that it would have been obvious to one skilled in the art to use the surfactant taught in Sakai to facilitate the coating process on the material taught in Bauer, thereby providing the material as claimed.

*Applicants Arguments Traversing the Substantive Rejection*

Applicants respectfully traverse the obviousness rejection of claims 1, 2 and 4-10 for the following reasons.

To sustain the rejection, the Action must demonstrate that, based on the teachings provided by Bauer and Sakai alone, one skilled in the art would have been motivated to substitute a surfactant disclosed in Sakai for the sole surfactant disclosed in Bauer, and have a reasonable expectation that the proposed substitution would be a success. Bauer's disclosure of a single surfactant, however, fails to teach or suggest that any surfactant other than the single surfactant disclosed therein could be used in Bauer with a reasonable probability of success. Indeed, Bauer teaches (only) the use of a "polysiloxane fluid" available under the trademark SF96. Nothing in Bauer suggests that any surfactant other than this specific

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polysiloxane could be used in its imaging layer—let alone a surfactant that is not a polysiloxane.

Moreover, there is no justification for selecting any surfactant from Sakai for use in the Bauer system because the systems of Bauer and Sakai are markedly distinct from one another, i.e., thermography v. silver halide emulsion photography.

The imaging arts have long recognized that the field of thermography (comprising both photothermography and substantially light-insensitive thermography) are clearly distinct from that of photography. Photothermographic and substantially light-insensitive thermographic materials (e.g., Bauer) differ significantly from conventional silver halide photographic materials (e.g., Sakai) which require processing using aqueous processing solutions.

In photothermographic and substantially light-insensitive thermographic imaging materials, a visible image is created by heat as a result of the reaction of a developer incorporated within the element. The development process for these materials should generally exceed 50°C, and routinely exceeds 100°C. In contrast, conventional wet-processed photographic imaging elements require processing in aqueous processing baths to provide a visible image (e.g., developing and fixing baths) and development is usually performed under more moderate temperatures (e.g., 30° to 50°C) to provide a visible image.

Because photothermographic and substantially light-insensitive thermographic elements require thermal processing, they pose different considerations and present distinctly different problems in manufacture and use, compared to conventional wet-processed silver halide photographic materials. Additives that have one effect in conventional silver halide photographic materials may behave quite differently when incorporated in substantially light-insensitive thermographic or photothermographic materials where the underlying chemistry is significantly more complex. The incorporation of such additives as, e.g., stabilizers, antifoggants, speed enhancers, sensitizers, supersensitizers and spectral and chemical sensitizers in conventional photographic materials is not predictive of whether such additives will prove beneficial or detrimental in substantially light-insensitive thermographic or photothermographic materials. For example, it is not uncommon for a photographic antifoggant useful in conventional photographic materials to cause various types of fog when incorporated into substantially light-insensitive thermographic or photothermographic materials, or for supersensitizers that are effective in photographic materials to be inactive in photothermographic materials.

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These and other distinctions between photothermographic and substantially light-insensitive thermographic materials and photographic materials are described in *Imaging Processes and Materials (Neblette's Eighth Edition)*; J. Sturge et al, Ed; Van Nostrand Reinhold: New York, 1989; Chapter 9 and in *Unconventional Imaging processes*; E. Brinckman et al., Ed: The focal Press: London and New York: 1978: pp. 74-75, and in Zou, Sahyun, Levy and Serpone, *J. Imaging Sci. Technol.* 1996, 40, pp. 94-103. Applicants would be pleased to forward copies of these materials upon request.

In view of the foregoing, applicants submit that it is generally accepted by those skilled in the art that the photographic art (e.g., Sakai) is not analogous to thermography (e.g., Bauer). Therefore, even if one were to identify a problem with a surfactant in a system such as that disclosed in Bauer, nothing in Sakai or Bauer would have provided one skilled in the art with any reasonable expectation of a beneficial outcome if a Sakai surfactant was selected any more than one might have with any surfactant known in the art. For this reason, applicants respectfully request withdrawal of the rejection of claims 1, 2 and 4-10.

In this same vein, applicants further submit that neither Sakai nor Bauer provide any motivation for the selection of a particular Sakai surfactant from the multitude of surfactants disclosed in Sakai, and that the selection set forth in the Action is based solely on hindsight analysis. Sakai teaches a system that is not analogous to the Bauer system, and therefore neither reference reasonably can be said to motivate one skilled in the art to select any of the Sakai surfactants for use in the Bauer system, let alone the particular surfactants selected by the Action. Absent any further basis supporting the selection of particular Sakai surfactants identified in the action, withdrawal of the rejections of claims 1, 2 and 4-10 on this basis alone is respectfully requested.

#### *Conclusion*

Applicants submit that the application is now in proper condition for allowance. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

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Respectfully submitted,



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Date: May 31, 2005